FIG. 1

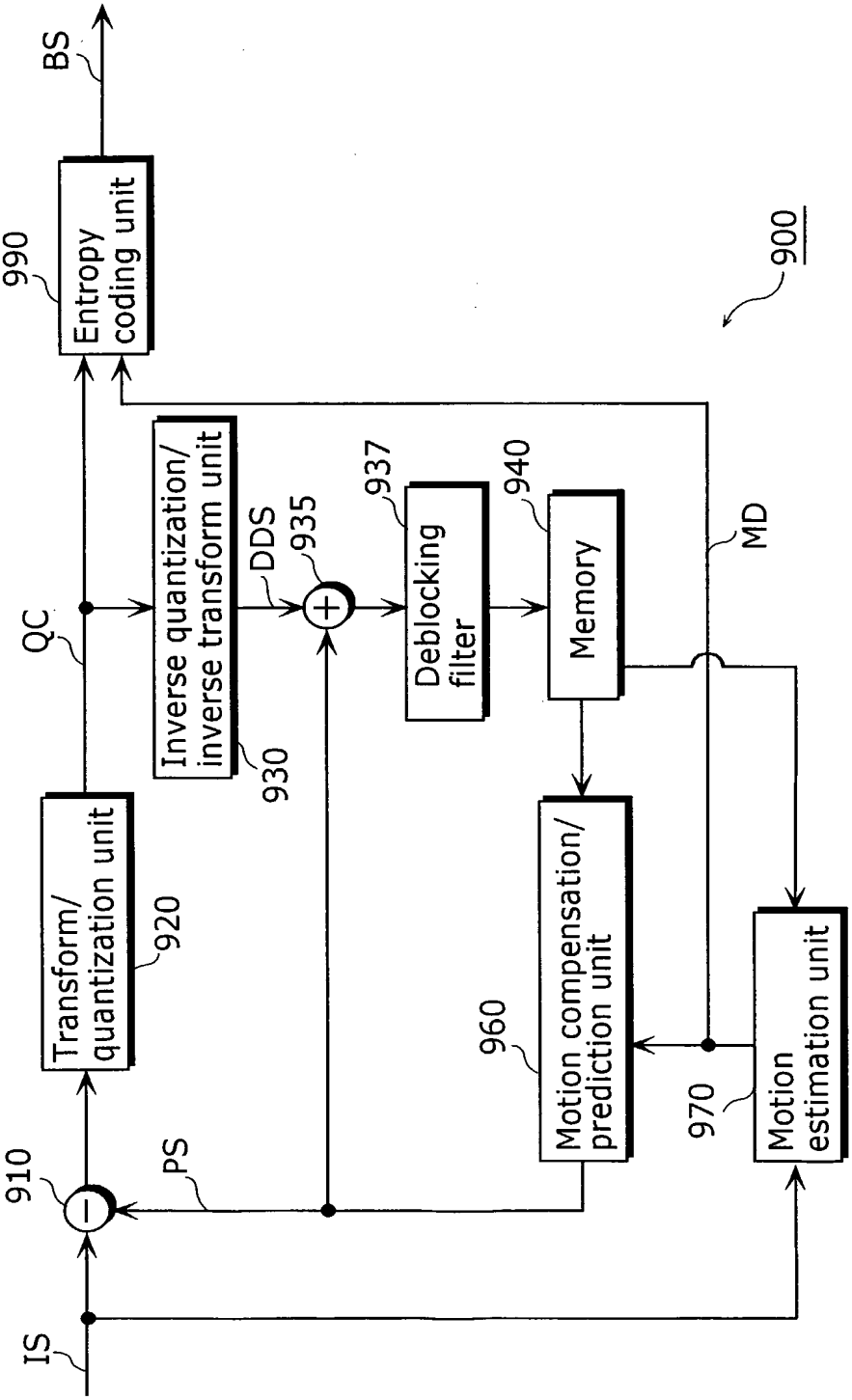
900
990
Entropy coding unit
BS
MD
QC
Inverse quantization/ inverse transform unit
930
DDS
935
937
Deblocking filter
940
Memory
Transform/ quantization unit
920
910
PS
960
Motion compensation/ prediction unit
970
Motion estimation unit
IS

FIG. 2

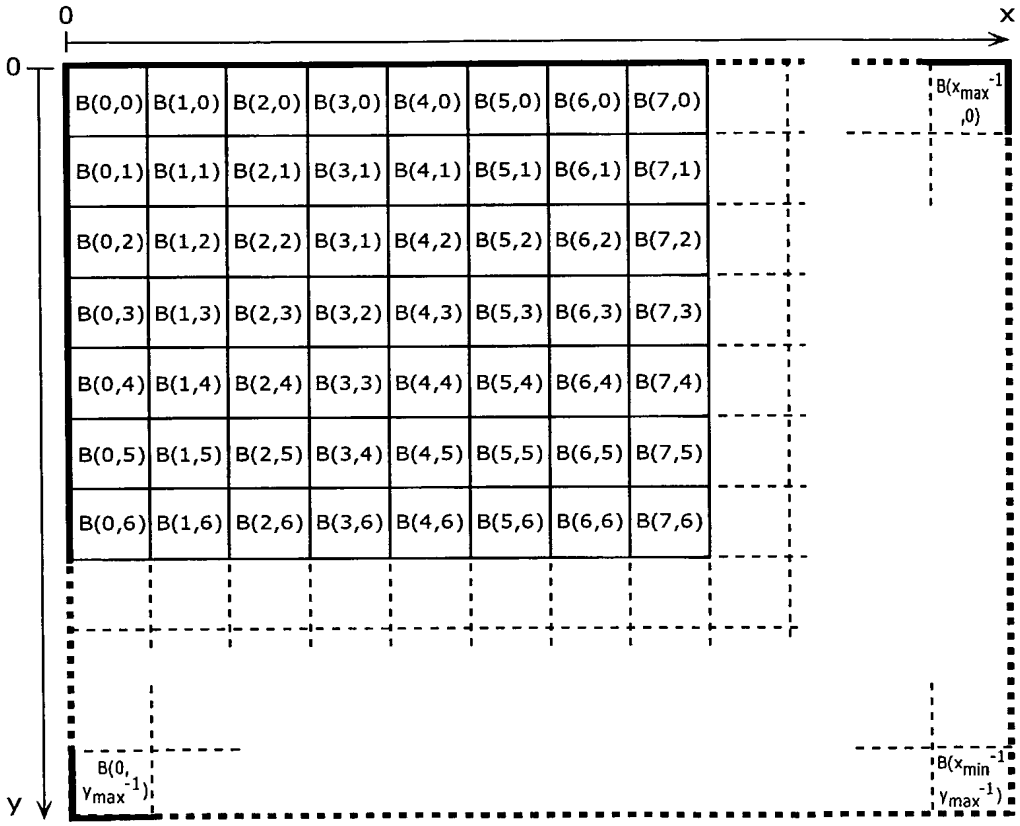
0
x
0
y
B(0,0) B(1,0) B(2,0) B(3,0) B(4,0) B(5,0) B(6,0) B(7,0)
B(0,1) B(1,1) B(2,1) B(3,1) B(4,1) B(5,1) B(6,1) B(7,1)
B(0,2) B(1,2) B(2,2) B(3,1) B(4,2) B(5,2) B(6,2) B(7,2)
B(0,3) B(1,3) B(2,3) B(3,2) B(4,3) B(5,3) B(6,3) B(7,3)
B(0,4) B(1,4) B(2,4) B(3,3) B(4,4) B(5,4) B(6,4) B(7,4)
B(0,5) B(1,5) B(2,5) B(3,4) B(4,5) B(5,5) B(6,5) B(7,5)
B(0,6) B(1,6) B(2,6) B(3,6) B(4,6) B(5,6) B(6,6) B(7,6)
B(x_max^-1, 0)
B(0, y_max^-1)
B(x_min^-1, y_max^-1)

FIG. 3

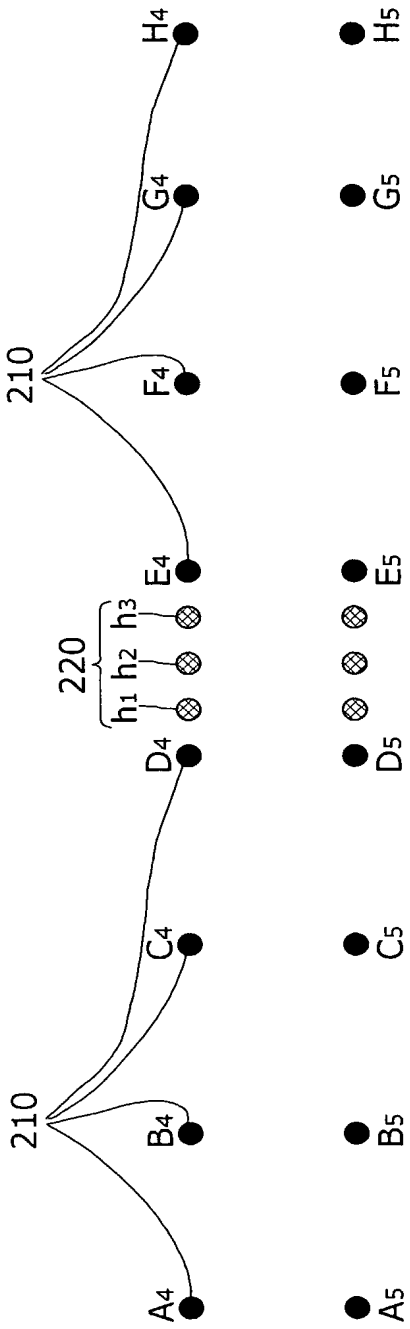

FIG. 4

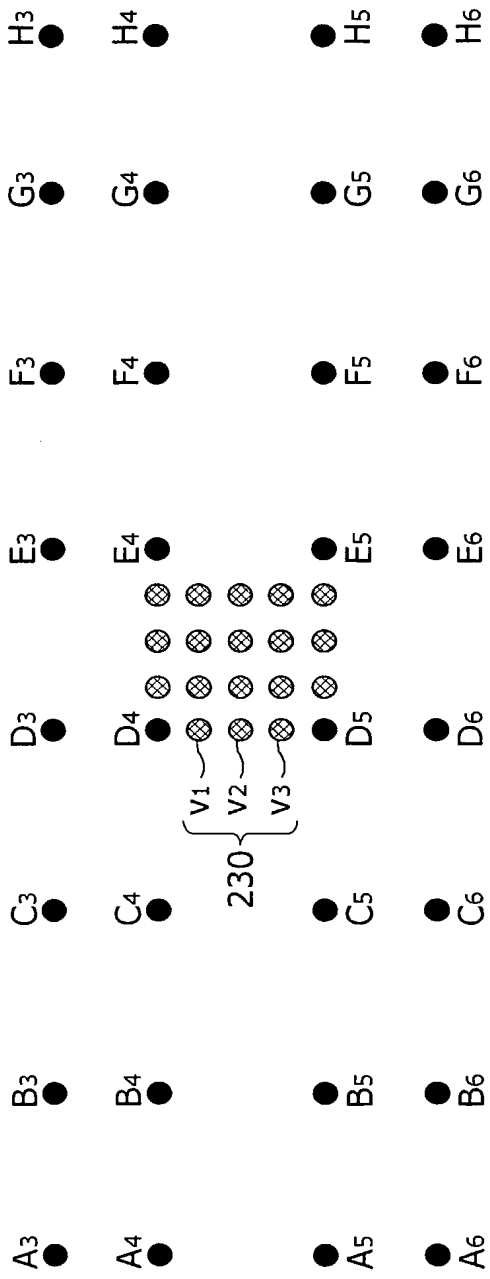
H3
H4
H5
H6
G3
G4
G5
G6
F3
F4
F5
F6
E3
E4
E5
E6
D3
D4
D5
D6
V1
V2
V3
230
C3
C4
C5
C6
B3
B4
B5
B6
A3
A4
A5
A6

FIG. 5

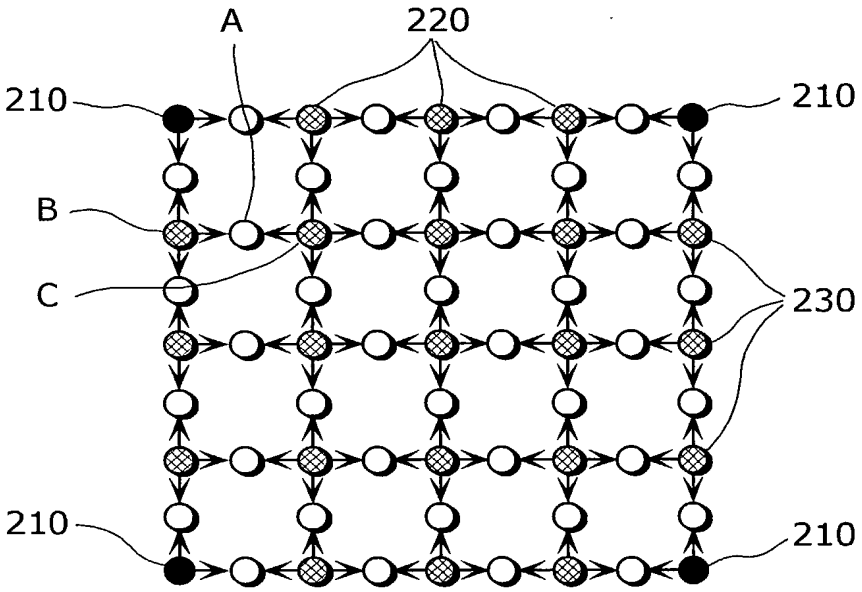

FIG. 6

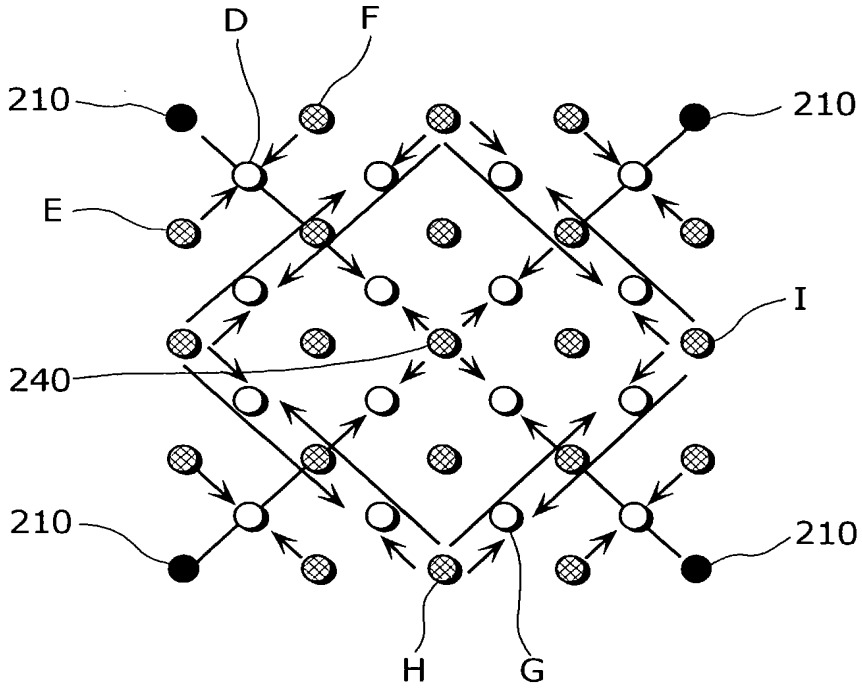

FIG. 7

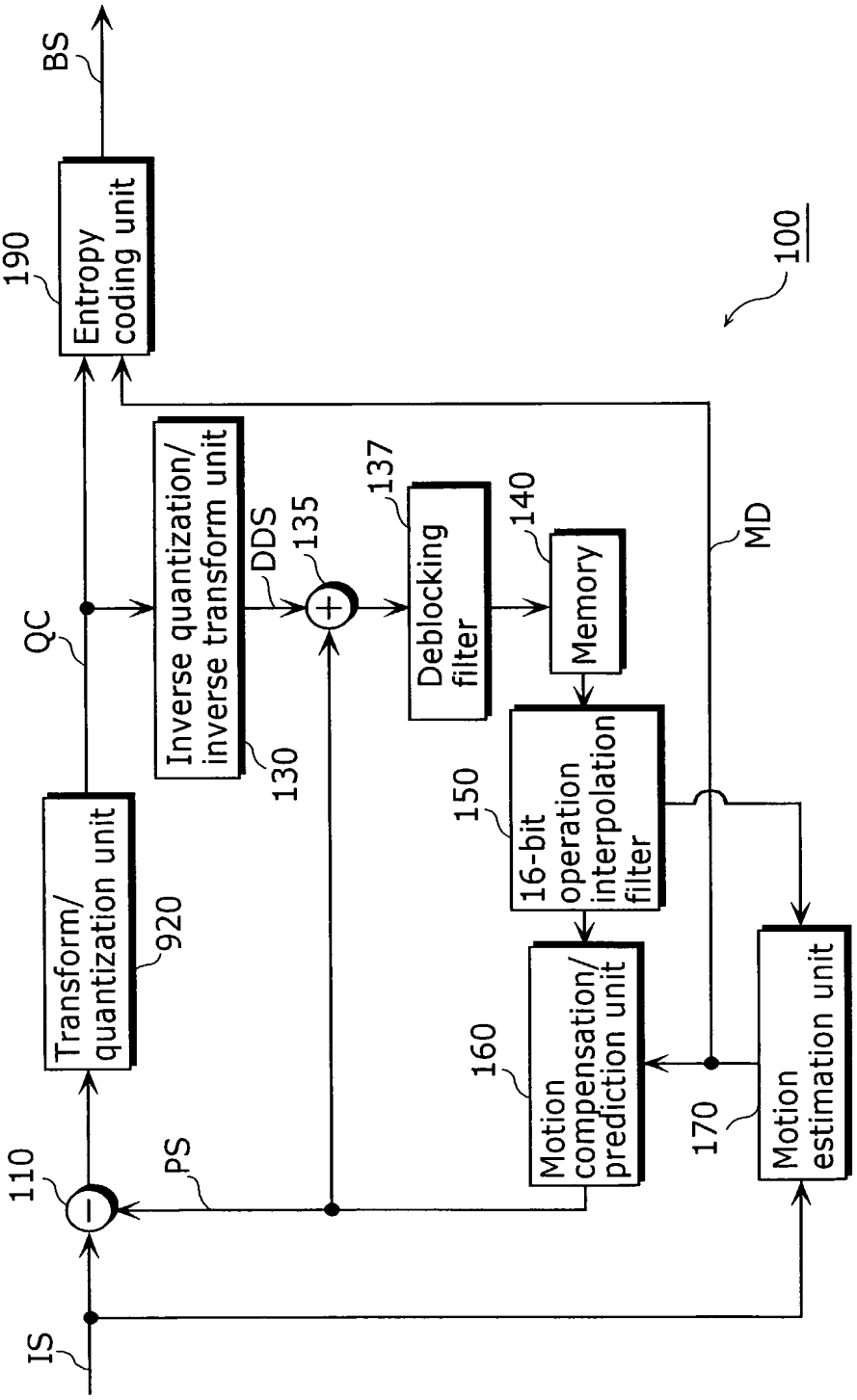
100
BS
190
Entropy coding unit
MD
QC
Inverse quantization/ inverse transform unit
DDS
135
137
Deblocking filter
140
Memory
130
150
16-bit operation interpolation filter
Transform/ quantization unit
920
160
Motion compensation/ prediction unit
170
Motion estimation unit
110
PS
IS

FIG. 8

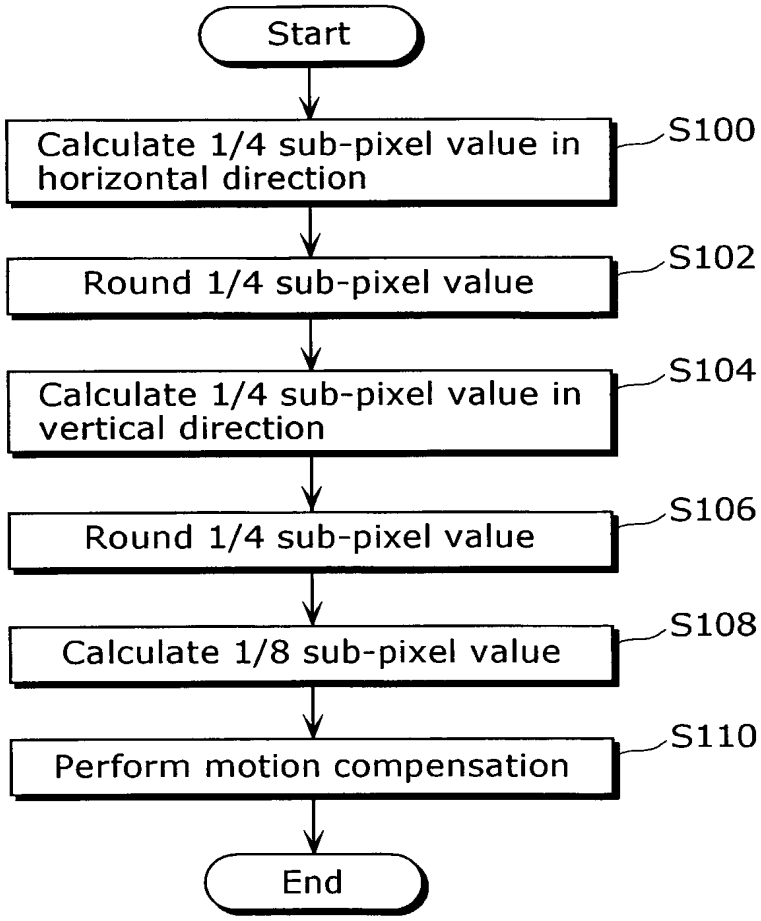
Start
Calculate 1/4 sub-pixel value in horizontal direction
S100
Round 1/4 sub-pixel value
S102
Calculate 1/4 sub-pixel value in vertical direction
S104
Round 1/4 sub-pixel value
S106
Calculate 1/8 sub-pixel value
S108
Perform motion compensation
S110
End

FIG. 9

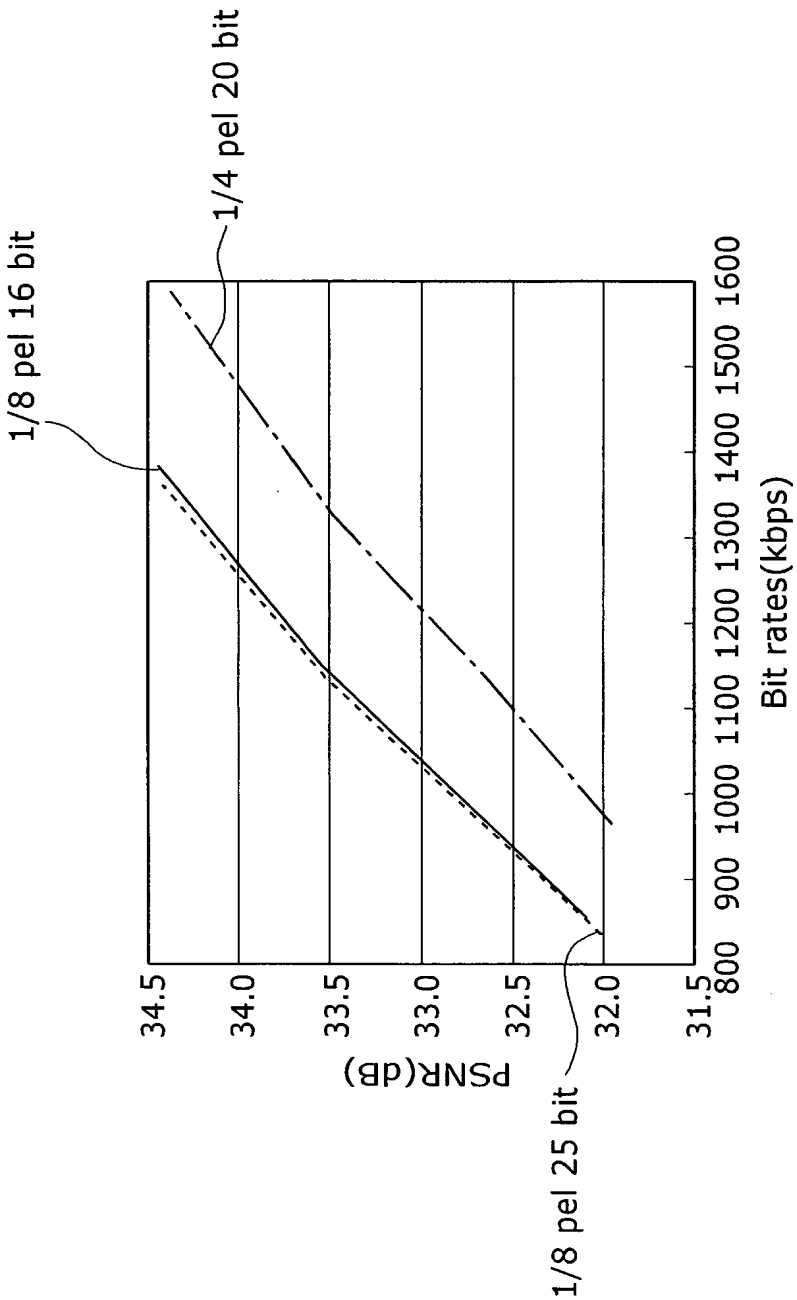
1/4 pel 20 bit
1/8 pel 16 bit
1/8 pel 25 bit
PSNR(dB)
34.5
34.0
33.5
33.0
32.5
32.0
31.5
800 900 1000 1100 1200 1300 1400 1500 1600
Bit rates(kbps)

FIG. 10

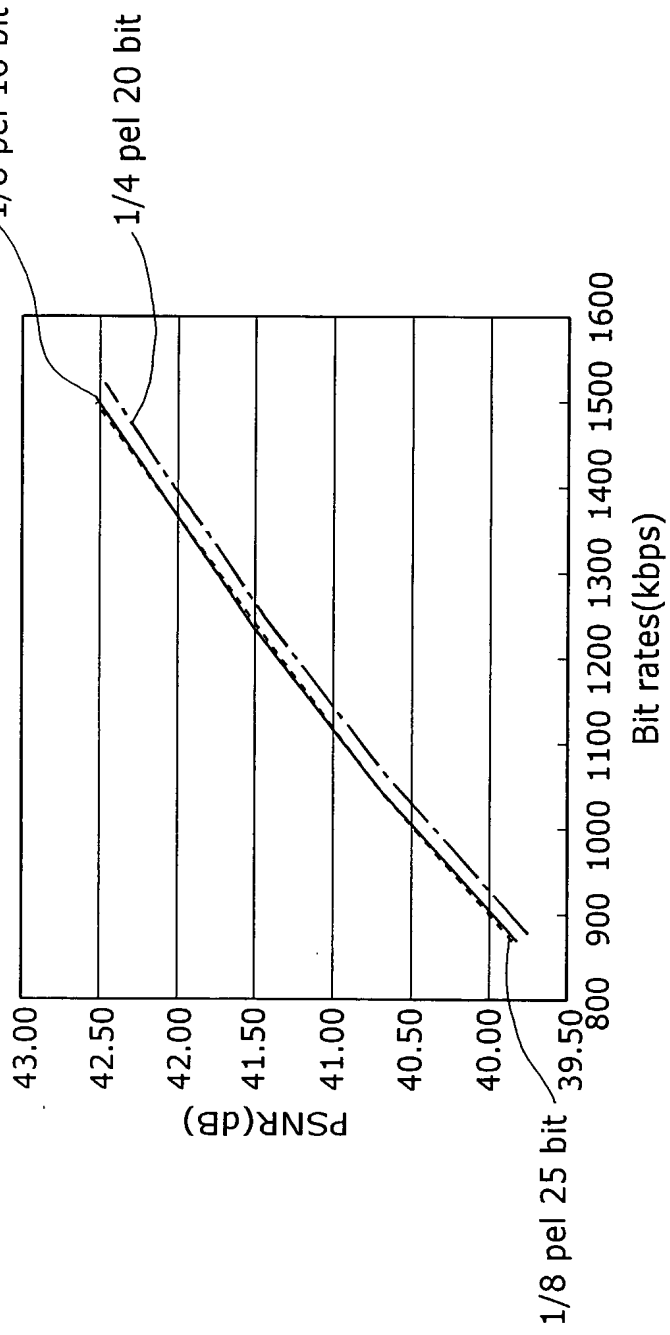
1/8 pel 16 bit
1/4 pel 20 bit
1/8 pel 25 bit
PSNR(dB)
43.00
42.50
42.00
41.50
41.00
40.50
40.00
39.50
800 900 1000 1100 1200 1300 1400 1500 1600
Bit rates(kbps)

FIG. 11

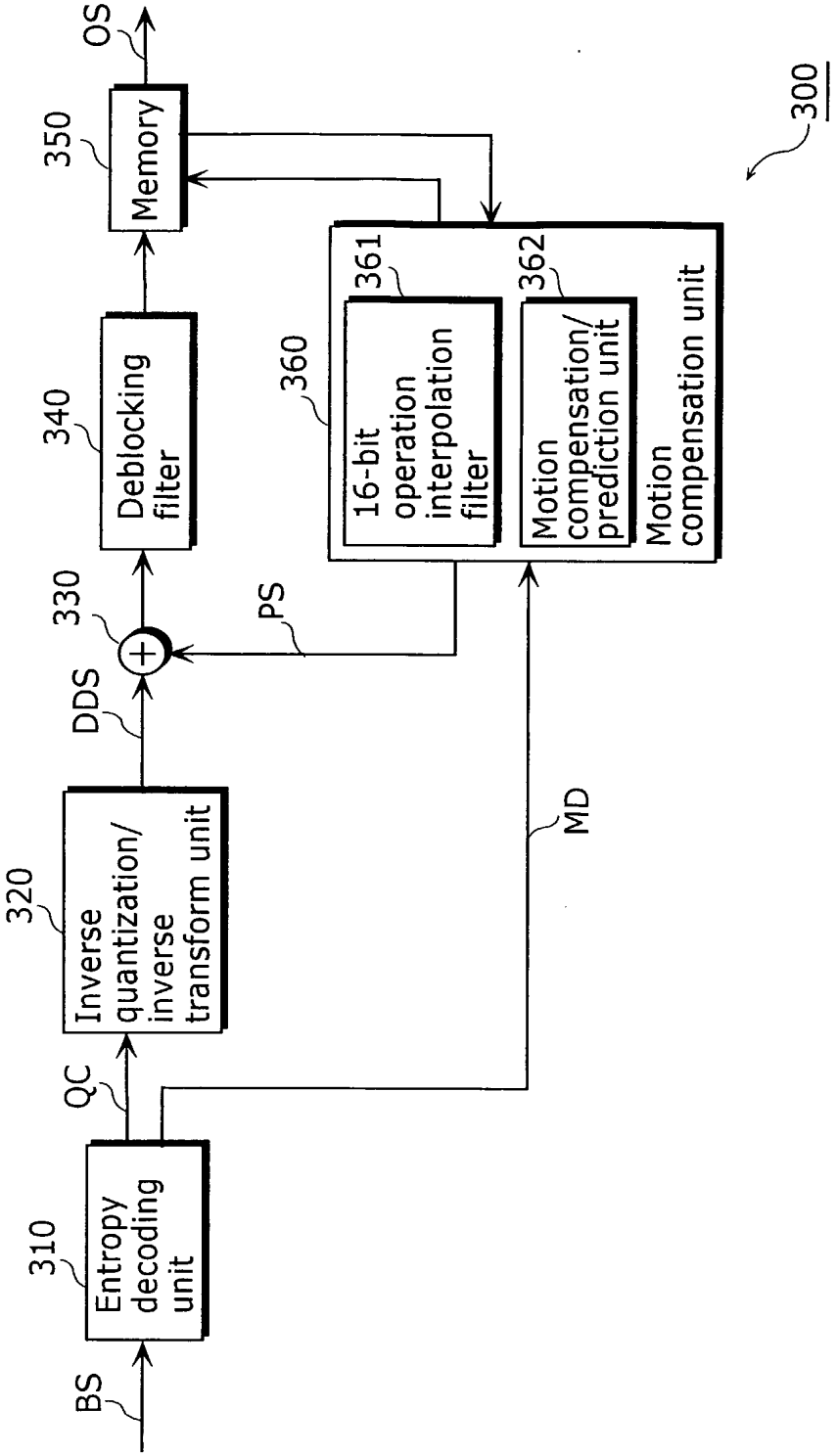
BS
310
Entropy decoding unit
QC
320
Inverse quantization/ inverse transform unit
DDS
330
PS
340
Deblocking filter
350
Memory
OS
300
360
361
16-bit operation interpolation filter
362
Motion compensation/ prediction unit
Motion compensation unit
MD

FIG. 12